

CLAIM AMENDMENTS

Claims 1 - 20 (Canceled).

21. (Original) An airblast atomization nozzle for a gas turbine comprising:

- a) an outer air cap having an interior chamber;
- b) an air swirler disposed within the interior chamber of the air cap and having an axial bore extending therethrough, the air cap and the air swirler defining an outer airblast circuit therebetween;
- c) a prefilmer disposed within the axial bore of the air swirler and having an axial bore extending therethrough;
- d) a fuel swirler disposed within the axial bore of the prefilmer and having an axial bore extending therethrough, the prefilmer and the fuel swirler defining a fuel circuit therebetween; and
- e) a heat shield disposed within the axial bore of the fuel swirler and having an axial bore extending therethrough defining an inner airblast circuit, the heat shield and the fuel swirler defining an air assist circuit therebetween.

22. (Original) An airblast atomization nozzle as recited in claim 21, further comprising a nozzle body including means for delivering fuel to the fuel circuit from a fuel pump associated with the gas turbine, and means for delivering high pressure, high velocity air to the air assist circuit from a supply source external to the gas turbine.

23. (Original) A pressure atomization nozzle for a gas turbine comprising:

- a) an outer cone having an axial bore extending therethrough;
- b) a fuel swirler disposed within the axial bore of the cone and having an

axial bore extending therethrough, the cone and the fuel swirler defining a fuel circuit therebetween for receiving low pressure fuel from a fuel pump associated with the gas turbine; and

- c) an air swirler disposed within the axial bore of the fuel swirler, the air swirler and the fuel swirler defining an air assist circuit therebetween for receiving high pressure, high velocity air from a supply source external to the gas turbine.

24. (New) A pressure atomization nozzle as recited in claim 23, wherein the air swirler includes a plurality of circumferentially disposed vanes for imparting a spinning motion to the air flowing through the air assist circuit.

25. (New) A pressure atomization nozzle as recited in claim 23, wherein the air swirler is disposed at a rearward end of the air assist circuit.

26. (New) A pressure atomization nozzle as recited in claim 23, wherein axial bore of the outer cone defines a discharge orifice, and wherein the air assist circuit is adapted and configured to direct an air assist current in such a manner so as to impinge upon the inner surface of the fuel issuing from the discharge orifice of the outer cone, so as to effectuate atomization of the low pressure fuel.

27. (New) A simplex airblast nozzle for a gas turbine comprising:

- a) an outer air cap defining an interior cavity; and
- b) a pressure atomizer disposed within the interior cavity of the outer air cap,

the outer air cap and the pressure atomizer defining an outer airblast circuit therebetween for directing compressor discharge air from the gas turbine, the pressure atomizer including:

- i) an outer cone having an axial bore extending therethrough;
- ii) a fuel swirler disposed within the axial bore of the cone and having

an axial bore extending therethrough, the cone and the fuel swirler defining a fuel circuit therebetween for receiving fuel from a fuel pump associated with the gas turbine; and

- iii) an air swirler disposed at the rearward end of the axial bore of the fuel swirler, the air swirler and the fuel swirler defining an air assist circuit therebetween for receiving high pressure, high velocity air from a supply source external to the gas turbine.

28. (New) A simplex airblast nozzle as recited in claim 27, wherein swirl vanes are operatively associated with the outer airblast circuit for imparting a swirling motion to the compressor discharge air flowing therethrough.

29. (New) A simplex airblast nozzle as recited in claim 27, wherein the air swirler includes a plurality of circumferentially disposed vanes for imparting a spinning motion to the air flowing through the air assist circuit.

30. (New) A simplex airblast nozzle as recited in claim 27, wherein the air swirler is disposed at a rearward end of the air assist circuit.

31. (New) A prefilming airblast atomization nozzle for a gas turbine comprising:

- a) an outer air cap having an interior chamber;
- b) an outer air swirler disposed within the interior chamber of the air cap and having an axial bore extending therethrough, the outer air cap and the outer air swirler defining an outer airblast circuit therebetween;
- c) a prefilmer disposed within the axial bore of the outer air swirler and having an axial bore extending therethrough defining a discharge orifice, wherein the outer airblast circuit directs engine compressor discharge air toward the discharge orifice of the prefilmer to impinge upon an outer surface of a fuel film issuing therefrom;
- d) a fuel swirler disposed within the axial bore of the prefilmer and having an axial bore extending therethrough, the prefilmer and the fuel swirler defining a fuel circuit therebetween for directing fuel toward the discharge orifice of the prefilmer; and
- e) a heat shield disposed within the axial bore of the fuel swirler and having an interior bore extending therethrough defining an inner airblast circuit for directing engine compressor discharge air toward the fuel film, upstream from the discharge orifice of the prefilmer, to impinge upon an inner surface of the fuel film issuing therefrom, the heat shield and the fuel swirler defining an air assist circuit therebetween for directing high pressure, high velocity air from an external supply source, toward the fuel film, upstream from the discharge orifice, so as to impinge upon the inner surface of the fuel film issuing therefrom.

32. A prefilming airblast atomization nozzle as recited in Claim 31, wherein an annular ring surrounds a forward end portion of the heat shield to create a clearance gap between the heat shield and the fuel swirler within the axial bore of the fuel swirler.

33. A prefilming airblast atomization nozzle as recited in Claim 31, wherein the outer air swirler includes a plurality of circumferentially disposed vanes for imparting a swirling motion to the engine compressor discharge air flowing through the outer airblast circuit.

34. A prefilming airblast atomization nozzle as recited in Claim 31, wherein the fuel swirler has a tapered forward end portion defining an internal mixing chamber, and wherein the engine compressor discharge air from the inner air blast circuit merges with the high pressure, high velocity air from the air assist circuit within the internal mixing chamber.